ON THE OCCURRENCE OF A SPECIES OF CREMNOBATES AT SAN DIEGO, CALIFORNIA.

By ROSA SMITH.

Three specimens of a small scaly Blenny found in those rocky tide-pools which are heavily lined with algæ, on March 6, 1880.

This Blenny is evidently of rare occurrence, this one point being at present its only known habitat on the Pacific coast of the United States, and these three specimens the only ones I could procure. It is accompanied by *Oligocottus analis*, which in this vicinity is abundant in all rock-pools, by *Gibbonsia elegans* of a dull color, and by *Hypleurochilus gentilis*.

These specimens were provisionally identified as belonging to *Cremnobates monophthalmus* (Günther) Steindachner (*Anchenopterus monophthalmus* Günther, Cat. Fishes Brit. Mus., iii, 275), a species hitherto known from three examples from the Pacific coast of Central America. My specimens differ from Günther's description in the following particulars: *The dorsal fin is continuous*, the membrane of the third spine joining the fourth near its summit in two examples, at its first third in the other. The head is proportionally shorter, forming two-ninths of the total length instead of one-fourth, and the body is less elongate, its depth forming one-fifth the total length instead of one-sixth. The characters of the San Diegan form of this genus agree more closely with Steindachner's description of *Cremnobates affinis* (Ichthyologische Beiträge, v, 178), a species considered by its describer as doubtfully distinct from *C. monophthalmus*. *C. affinis* is known from one individual taken on the West Indian island of St. Thomas, the proportions and coloration of which accord with my specimens, but this species also has the membrane from the third dorsal spine joining the fourth *at its base* ("die Membrane des dritten letzten Strahles setzt sich an die Basis des folgenden ersten Stachels des zweiten Dorsales an").

If the specimens from San Diego prove to be of a distinct species, which seems probable, they will be separated from those already known by the single merely emarginate dorsal fin, instead of two separate fins. In any event, the genus *Cremnobates* furnishes an interesting addition to the fauna of our Pacific coast.

Cremnobates integripinnis sp. nov.

DESCRIPTION.—The body is oblong, compressed. The head is less than the fourth of the total length, which measures two inches and an eighth. Gape of mouth oblique, the maxillaries reaching a vertical line intersecting posterior rim of orbit. Head conical, thickish, with the orbits placed far forward, small fringed tentacles on their superior margins, a tentacle on posterior margin of anterior nostril, and palmate tentacles on occiput. A cusp or spine on opercle.

Dorsal continuous, composed wholly of spines of nearly equal height

throughout, the first and second spines a little higher than the third, which is rather higher than the fourth, the third and fourth somewhat separated, but connected by membrane nearly as high as that connecting fourth and fifth, the other spines gradually increasing in height backward. The three anterior spines less stiff than the others.

The two anal spines are connected by a membrane to the soft part of that fin, the anterior insertion of which is about midway between tip of snout and base of caudal. The caudal is posteriorly rounded, its interradial membrane being emarginate; the membrane of the last dorsal spine joins the base of the first ray of the caudal, while the latter is free from anal, the free tips of which extend beyond base of caudal.

Pectorals fan-like, their extremities reaching a vertical line intersecting vent. Branchiostegal membranes continuous under throat. Body covered with conspicuous cycloid scales, which are smaller on the belly. No scales on head or fins.

Lateral line of thirty-eight scales, beginning on the scapular region, running anteriorly very high, abruptly curving around pectorals, and pursuing a straight course on the median line of the side to the tail.

Teeth rather strong, conical, in a narrow band; a single series of rather strong teeth on vomer.

Color varies in three individuals: one is a dark brownish gray; another, of equal size (2⅛ inches long), is lighter; while a third, of 1½ inches in length, is lavender in color. The markings are similar on all my specimens, each being maculated and obscurely barred with a darker shade of its own color; the dorsal region is always darkest, and each individual has an ocellated spot, black, with narrow pale edging on posterior portion of dorsal fin. Dorsal and anal fins each with narrow pale edging. Pectoral fins reddish violet at base, with a black crescent around it, the rest of the fin pale, with dark cross-bars. Ventrals barred. Caudal with a dark bar at base, the rest of the fin translucent, with narrow dark bars formed of spots.

Table of measurements.

Length:	
Total, in inches	2.05
To base of caudal, in inches	100 = 1.70
Body, greatest depth	23
Head:	
Length	26
Diameter of eye	7.5
Length of maxillary	11
Dorsal fin:	
Total length	80
Distance from snout	21
Length of anterior part	9
Height of first spine	6
Height of second spine	7
Height of third spine	4
Height of fourth spine	3
Height of highest spine	7.5
Height of membrane connecting third and fourth spines	1.8

Anal fin, distance from snout	4.7
Caudal, length	18
Pectoral, length	24
Ventral, length	17
Fin rays:	
Dorsal	XXXII
Anal	II, 20
Scales in lateral line	38

The specimens have been presented to the United States National Museum.

San Diego, Cal., *April* 10, 1880.

ON SOME NEW SPECIES OF EOCENE MOLLUSCA FROM THE SOUTHERN UNITED STATES.

By ANGELO HEILPRIN.

A part of the species herein described have been for several past years among the collections of the United States National Museum. Those which are mentioned as coming from Texas were collected by Mr. G. W. Marnoch, who sent them some years ago to Dr. C. A. White, and were by the latter gentleman presented to the National Museum. The number following the description of each species is that by which it is recorded in the museum register.

PLEUROTOMA, Lam.

Pleurotoma pagoda, n. sp.

Plate, fig. 1.

Ventricose; whorls about nine, the body-whorl nodulated on its most convex portion (nearly central), the nodulation consisting of a single series of sharp, obtusely-pointed, and flattened spines or nodes, which frequently appear double by the crossing of an impressed line over their basal portion; upper volutions with a similar series of nodes almost immediately above the sutural line, and gradually dwindling off into a crenulation; upper surface of the whorls concave, faintly striated, the sinual rugæ indicating but a faint sinus; lower surface with numerous well-developed revolving lines, which show a tendency to alternate. Aperture exceeding the spire in length, considerably contracted at about its center.

Length, 1½ inch. (No. 1505.)

Eocene of Alabama.

This species in its general appearance greatly resembles certain forms of *Fusus*, and a comparison of more numerous specimens may show it to belong to that genus, although the ornamentation of the whorls, as well as the sinual indication, more clearly point to *Pleurotoma*. The